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THE IMPACT OF COVID IN HIGHER EDUCATION

Effect of COVID-19 pandemic on academic accreditation

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Abstract

Background: Higher education quality is an essential measurement for any country's development, since education is a significant source of new sciences and its applications. This importance works as one of the cornerstones toward public health. The sudden change from traditional classroom teaching and learning to online education and learning process did not give educators the time to adjust the teaching material or, for that matter, did not give the program administrators the time to prepare for the needed documents toward the accreditation. This situation creates a dilemma for all members involved in certification. This research is addressing this issue from the accreditation point of view.

Design: Brainstorming methodology is used to study the effect of COVID-19 pandemic on the academic/health accreditation.

Methods: Cause and effect diagram (Fishbone diagram) is used to present the ideas presented by institutional participants related to the effect of COVID-19 on the accreditations processes.

Conclusions: The study shows that COVID-19 pandemics have dramatic influence on accreditation processes, which may lead to change and/or adjust the rules and the requirements of the educational institutions due to changes in the fulfillment of the accreditation by the institutions during this period.

Introduction

The COVID-19 pandemic forces schools and academic institutions' closure worldwide with a different time and duration. This closure has researchers studying its effect. This is a case where many researchers studied the effect of the closure on Education, Science, and Culture, which focuses on the consequences of the closure of centers at the higher education level.[1] The effects on student learning, there have been investigations[2] showing that the 10% reduction in the duration of educational instruction decreases by 1.5% of the standard deviation. However, more recent studies have affirmed that with the use of Information and Communication Technologies (ICT) under an appropriate approach, learning should not be impaired or diminished by the interruption of face-to-face classes.[3] A meta-analysis was commissioned by the United States Department of Education,[4] in which virtual learning was compared to face-to-face learning. The analysis was very conclusive and reported that the mean effect was a 24% higher standard deviation for virtual learning. Secondly, the impact on future student wages was analyzed. Regarding this consequence, the decrease in salary stands out in students who suffered the closure of their training centers and consequently saw their learning level drop with the corresponding downward labor remuneration.[5] Finally, the effects on the educational dropout rate were studied. As already mentioned, the closure of schools may increase dropout rates. UNESCO reports in its document on the adverse consequences of school closures caused by the COVID-19 pandemic[6] and other previous research[7] that have analyzed the achievement of students who suffered a school closure.

This study will focus on the effect of COVID-19 and its effect on academic accreditation. Higher education quality is defined mainly by its ability to meet the accreditation body's requirements responsible for education in that country.[8] This study aligns with the Kingdom of Saudi Arabia (KSA) National Transfer Program (NTP) 2020 related to education: improving the learning environment to stimulate creativity and innovation; improving curricula and teaching methods, and improving students' values and core skills by studying the effect of the sudden transformation from traditional classroom setting to distance learning due Corona Virus Pandemic on the implementation of course learning outcomes and some other factors as discussed later. The KSA refers to education as one of its leading quality parameters toward achieving its strategic objectives in 2030 vision. The accreditation processes include several tasks that should be prepared and meets the accreditor's body to get the official accreditation for specific period of time. Figure 1 illustrates the processes of getting accreditations and all stakeholder involvement. Students are the focal point of the operations itself.

The processes have to go through continuous improvements to achieve Bloom's taxonomy, which is considered the top of the pyramid. This research will address the effect on a program accreditation of the sudden change of the teaching and learning from the traditional classroom setting into the online. The production and manufacturing engineering program at a private university in the KSA is considered as a case study to achieve the goal of this study using brainstorming managerial processes and applying the fishbone diagram to conclude.

Mainly, the following questions will be addressed: i) The

Significance for public health

Higher education quality is an essential measurement for any country's development since education is a significant source of new sciences and its applications. This importance works as one of the cornerstones toward public health. The sudden change from traditional classroom teaching and learning to online education and learning process did not give educators the time to adjust the teaching material or, for that matter, did not give the program administrators the time to prepare for the needed documents toward the accreditation. This situation creates a dilemma for all members involved in certification. This research is addressing this issue from the accreditation point of view.

effect on learning objectives, assessment methods, and instructional techniques for the individual course and its impact on the accreditation cycle; ii) What steps can be taken at the program and course levels to offset any adverse effect on the results? To achieve learning objectives, instructors must ensure that students score a predetermined achievement level in the course learning outcomes. Learning outcomes can be defined as statements that describe what students can do or perform at the end of the learning process. Probably, they have to be differentiated from learning goals. Outcomes of learning are directly related to students to ensure understandable directions of what they have to accomplish throughout a course/program. In turn, learning goals are designed for teachers concerning program management and implementation.[9] Bloom who was an expert in education,[10] classified learning outcomes by three core dimensions of study: cognitive (based on knowledge), emotional (based on attitude), as well as psychomotor (based on human skills). National Commission for Academic Accreditation and Assessment (NCAAA) is the school accreditation facility for Saudi Arabia. It is an autonomous body but directly responsible to the council of higher education. It has also classified learning outcomes by three relevant dimensions based on Blooms' taxonomy: knowledge, competence, and skills, referring to the so-called Saudi Qualification Framework (SAQF). The application of teacher assessment techniques has got a lot of attention in terms of policymaking. Studies have revealed that 15-25% of the discrepancy in student accomplishments and grades is rather attributed to teachers' work and contribution.[11] Eventually, a variety of research-related classroom monitoring tools have been designed since then.[12,13] Today, teacher assessments fulfill three essential functions. They are not limited by policies anymore, yet parts remain to be of formative and summarizing nature. Summarizing teacher assessment maintains decisions on teacher's choices as well as solutions related to career development.

Nonetheless, it is relatively neglected that good summarizing decisions should be assessed based on more than ten independent evaluations made by diverse experts.[14] The formative assessment also demands different monitoring reviews from experts to constitute a valid decision. In the context of teaching, this issue is typically managed by a brief communication with a teacher under observation, with asking something like: "Was the class indicative enough?" or "Have you had the chance to demonstrate all professional skills?" If answers are mostly negative, a second monitoring assessment is conducted. Nowadays, the techniques of measuring learning outcomes and course performance include delivering questionnaires to students and/or using students' results in the course and analyzing them to check the status of the achievement. This questionnaire lists the Course Learning Outcomes (CLOs) that the students have to utilize to assess their predefined CLOs.[15]

Online learning overlaps with the concept of distance learning, which uses earlier technologies such as educational television and videoconferencing. Previous studies of distance learning concluded that these technologies were not significantly different from regular classroom learning in effectiveness.[16] Policymakers reasoned that if online instruction is no worse than traditional teaching in terms of student outcomes, then online education initiatives could be justified based on cost efficiency or need to provide learners access to settings where face-to-face instruction is not feasible. The question of the relative efficacy of online and face-to-face education needs to be revisited under the current circumstances due to the Corona Virus pandemic, which forces the educational systems worldwide to use online learning. However, in light of today's online learning applications, which can take advantage of a wide range of Web resources, including not only multimedia but also Web-based applications and new collaboration technologies.

Problem statement

As stated before, the sudden change from traditional classroom teaching and learning to online education and learning process did not give educators the time to adjust the teaching material or, for that matter, did not give the program administrators the time to prepare for the needed documents toward the accreditation. This situation creates a dilemma for all members involved in certification. Any academic program accreditation has to go through three stages: pre-visit, during the visit, and after the external visit. A committee was developed from three faculty members and the Evaluation and Academic Accreditation Center personal from a private university in the Kingdom of Saudi Arabia to discuss this issue. The panel came up with the cause and effect diagram, as shown in Figure 2.

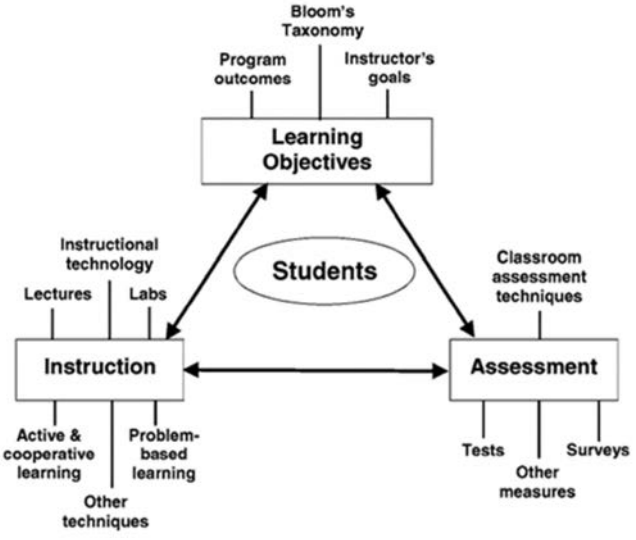

Figure 1. Illustrates the accreditation stakeholders and processes.

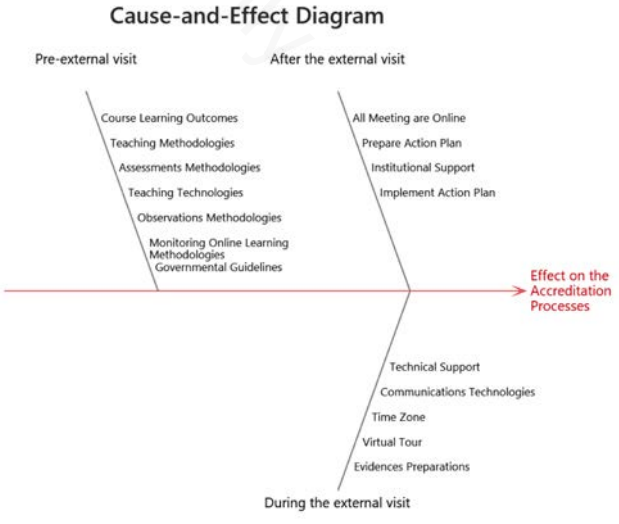

Figure 2. Cause and effect diagram.

Following are the observations as seen by brainstorming sessions.

Pre-external visit

i) Course Learning Outcomes, together with teaching and assessment methodologies, should be updated based on the online learning process. When looking at students' works to evaluate their academic achievements using the predetermined CLOs to meet specific program learning outcomes. Especially when it comes to project-based learning, the results are not up to the high-quality level sought due to the new type of learning methodology. Students' work is less uniform, lacks basic project-based learning requirements, and tends to fit into homework assignments style. According to the glossary from the education reform web site, project-based learning refers to any programmatic or instructional approach that utilizes multifaceted projects as a central organized strategy for educating students.[17] In the engineering management program of study, students frequently are asked to work on projects assigned to subject materials that require them to use diverse skills such as literature review, data collection, hypothesis testing, statistical analysis, writing, interviewing, collaborating, and researching. Hence with the sudden transformation to online learning, the project-based teaching methodology could not be used effectively, which creates a diversion from achieving the CLOs and accordingly, the program learning outcomes.

ii) Ensure that the teaching and learning process takes place even in an online environment. Faculty members should focus on presenting all course material even though they have less interaction with students, and some students and faculty members are getting bored due to this environment.

iii) Train the faculty members with technologies that will help them make the teaching and learning process more exciting and interactive. The teacher's role in the effective use of internet tools in the teaching-learning process after the COVID-19 crisis is essential and important;[18] for this, teachers have to have training that leads to them assimilating the pedagogical uses of the internet.

iv) Academic leaders should observe their faculty members' online class by joining the online classroom and making notes regarding the strengths and weaknesses observed in the class. This point will help faculty members prepare the material and adjust the class content based on the academic leader's feedback in charge of the situation.

v) Continuously monitor the quality of online class using the required documentation such as Course Reports. Educators should monitor the progress of the teaching methods they are using to improve then process with time.

vi) Follow the guidelines and instructions from the government, *i.e.* Ministry of Education. Practical courses should be done face-to-face with physical distancing and safety precautions. As time permit and the health situation improves, faculty members should go back to the traditional teaching and learning methods with academic leaders' guidance.

External visit

vii) All evidence should be available in softcopy, and a virtual "exhibition room" with all supporting documents should be available. The academic program should ensure that the exhibition room material is converted to soft copies to facilitate the review of all material.

viii) Virtual tour of the school's facilities instead of the traditional campus tour. It is vital to prepare for the tour virtually, and it has to be done by a professional entity to give a clear picture of the physical labs, library, sports arenas, etc.

ix) Consider the time zone of the interviewees and interviewers. Faculty members should be aware to the difference in time zone between the reviewers and the academic facility.

x) Ensure all communication technologies are working before the first virtual session. It is imperative not to have any communications issues during the virtual visit, and the IT teams should stand by for any glitches.

xi) Technical support should be available throughout the virtual visit.

Post external visit

xii) All meetings are done online in analyzing the recommendtions received from the external review team.

xiii) Prepare the action plans based on the recommendations.

xiv) Get the support of the institutions in implementing the recommendations.

xv) Implement the action plans.

Conclusions and final remarks

The pandemic caused by the COVID-19 disease has a substantial negative impact on societies all over the world. This negative impact stems from a social, health, political, educational, and economic perspective. In the academic field, this sudden shift goes beyond the teaching and learning methods. The fact that different educational administrations have had to carry out a transfer of the educational system from face-to-face teaching to online teaching at a speed of real urgency is causing the use of internet to have gone from being a help source of teaching and learning to a necessary solution so that the teaching and learning process will continue thus avoiding the collapse of educational processes. This shift also creates an economic and health issue since educational institutions' closure develops a new reality for parents and students. On the other hand, it will help as a health measure since the closure of schools and the adoption of online education would help stop the pandemic's spread. For this reason, the transformations that are taking place are affecting the teaching profession itself. At the same time, education professionals must adapt to the new situation that will influence other aspects of education related to teaching and learning, such as academic accreditations. In this way, the generation of new learning styles would be facilitated. On the other hand, for the accreditations processes to be more effective, a proposal that has been put forward should be adapted since the COVID-19 pandemic has changed how the academic accreditation processes are managed. Along the line of other authors,[19] a series of measures were assumed that must precede the proposal presented, such as the provision of material resources (especially technological devices) and human resources and the reformulation of the elements of curricula, including evaluation processes. Faced with this pandemic situation, online teaching, as has been described throughout the article, is becoming a solution to continue developing academic curricula. These are measures that fall not only on institutional leaders or teachers and school leaders but also on the accreditation body. This shows that, like the fight against COVID-19, this is a shared responsibility of parties involved.

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